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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
COLLINS, CYNTHIA E

ART UNIT	PAPER NUMBER
1638	17

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/477,730	SUGITA ET AL.	
	Examiner	Art Unit	
	Cynthia Collins	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *31 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

The Appeal Brief filed January 31, 2003, paper no.16, has been entered.

Claims 1-13 are pending.

The finality of office action mailed November 4, 2002 is hereby withdrawn.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

All previous objections and rejections not set forth below have been withdrawn.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claim is drawn to a vector which comprises a desired gene "wherein the desired gene is not a selectable marker gene". The limitation "wherein the desired gene is not a selectable marker gene" does not find support in the specification as originally filed, and thus constitutes new matter.

Claims 1-5 and 7-13 remain rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons of record set forth in the office action mailed November 4, 2002.

Applicant's arguments filed January 31, 2003, have been fully considered but they are not persuasive.

Applicant argues that page 10 of the specification provides a detailed description of plant hormone signal transduction genes which can be used as selectable maker genes, and that just merely providing the names of these genes provides the required structural and functional description of these sequences because these sequences are known in the art (brief page 5).

The Examiner disagrees that merely providing the names of plant hormone signal transduction genes provides the structural and functional description necessary to support the claimed invention. The claims are not limited to plant hormone signal transduction genes, but rather are directed to plant hormone signal transduction genes that function as selectable marker genes. The Examiner maintains that the specification describes only one plant hormone signal transduction gene that can function as a selectable marker gene, the cytokinin signal transduction gene CKI1. With respect to the plant hormone signal transduction genes recited at page 10 of the specification, the Examiner maintains that the prior art teaches only a specific signal transduction function for the product of these genes, and not a selectable marker function.

Claims 1-5 and 7-13 remain rejected under 35 U.S.C. 112, because the specification, while being enabling for a vector comprising a desired gene and the cytokinin signal transduction gene CKI1 as a selectable marker gene, and for a vector comprising a desired gene and a selectable marker gene that is the cytokinin signal transduction gene CKI1 located within a removable DNA element that is from the yeast site-specific recombination system pSR1, and for a vector comprising a desired gene, and the plant hormone synthesis gene *ipt* together with the plant cytokinin signal transduction gene CKI1 as selectable marker genes, does not reasonably provide enablement for vectors comprising any plant hormone signal transduction gene as a selectable marker gene, or for vectors comprising a selectable marker gene that is a plant hormone signal transduction gene located within any removable DNA element or for vectors comprising any plant hormone synthesis gene together with any plant hormone signal transduction gene as a selectable marker gene, for the reasons of record set forth in the office action mailed November 4, 2002, and for the reasons set forth below.

Applicant's arguments filed January 31, 2003, have been fully considered but they are not persuasive.

Applicant argues that the specification provides a detailed description of how to make and use the claimed vector. Applicant also argues that the specification provides a detailed description of plant hormone signal transduction genes at page 10, that the working examples at pages 27-45 provide specific details regarding how to make the claimed vector and select the transformed tissue, and that one skilled in the art could, without undue experimentation, readily prepare and use other vectors within the scope of the claims (brief page 6).

The Examiner maintains that undue experimentation would be required to practice the full scope of the claimed invention. The claims are drawn to vectors comprising any plant hormone signal transduction gene as a selectable marker gene, alone or in combination with any plant hormone synthesis gene as a selectable marker gene. As noted previously, the specification discloses the use of vectors comprising only the CKI1 cytokinin signal transduction gene as a selectable marker gene, alone or in combination with only the *ipt* cytokinin synthesis gene as a selectable marker gene, with transformed plants being selected on the basis of bud differentiation from calli grown in cytokinin free media.

The breadth of the claims is not commensurate in scope with the disclosure. First, a variety of structurally and functionally distinct hormones are known the art. For example, auxins are a group of compounds that are synthesized from tryptophan and that promote effects such as cell enlargement, root initiation and cell division in tissue culture, vascular tissue differentiation, apical dominance, leaf senescence and abscission (Davies in Plant hormones and their role in plant growth and development, 1987, Martinus Nijhoff Publishers, pages 4-5). In contrast, gibberellins are a group of compounds that are synthesized from mevalonic acid and that promote effects such as stem growth, bolting, and induction of seed germination (Id. at pages 5-6). Cytokinins are a group of compounds that are synthesized from adenine and that promote effects such as shoot initiation and cell division in tissue culture, lateral bud growth, leaf expansion and chloroplast development (Id. at pages 6-7). Ethylene is a single gaseous compound that is synthesized from methionine that promote effects such as adventitious root formation, fruit ripening, and flower and leaf senescence (Id. at pages 7-8). Abscisic acid is a single

compound that is synthesized from mevalonic acid and that promote effects such as stomatal closure, transport and uptake of photosynthate in developing seeds and storage protein synthesis in seeds (Id. at pages 8-9).

Given the functional diversity of plant hormones in general, the perturbation of any hormone other than cytokinin for the purpose of selecting transformed plant cells would be unpredictable. The specification provides no guidance with respect to how to manipulate the effects of plant hormones other than cytokinins in order to select transformed plant cells. The specification only provides guidance with respect to how to manipulate the effects of cytokinins through the use of the CKI1 cytokinin signal transduction gene as a selectable marker gene, alone or in combination with the *ipt* cytokinin synthesis gene as a selectable marker gene, with transformed plants being selected on the basis of bud differentiation from calli (a cytokinin effect) grown in cytokinin free media. Accordingly, it would require undue experimentation for one skilled in the art to determine how to select transformed plant cells using a system based on plant hormones other than cytokinin.

Second, a variety of structurally and functionally distinct hormone biosynthetic enzymes are known the art. Plant hormone biosynthetic enzymes vary both within the biosynthetic pathway of a particular plant hormone as well as between the biosynthetic pathways of different plant hormones. Furthermore, the ability of any particular biosynthetic enzyme to affect the endproduct of a biosynthetic pathway is dependent on variety of factors, such as the availability of its substrate, its susceptibility to end-product inhibition, the availability of subsequent enzymes in the pathway, or end-product conjugation post-synthesis. For example, expression of the auxin biosynthesis gene *NIT2*

in transgenic *Arabidopsis* has little effect on plant development or auxin content unless the plants are supplied with the intermediate indole-acetonitrile exogenously, and antisense expression of *NIT2* resulted in a decrease in the total auxin content of seedlings but had little effect on the free auxin content (Hedden et al., Current Opinion in Biotechnology, 2000, Vol. 11, pages 130-137, see page 130 column 2 third paragraph). Hedden et al. also teach that attempts to manipulate gibberellin content may be hampered by homeostatic compensation such as by bioactive gibberellins effecting the repression of the transcription of the gibberellin biosynthesis gene encoding GA 20-oxidase and the promotion of the transcription of the gene encoding the gibberellin inactivating enzyme GA 2-oxidase (page 132 column 2 second paragraph). Hedden et al. additionally teach that overexpression of the ethylene biosynthesis gene encoding ACC synthase in transgenic tobacco leads to increased ethylene production, whereas no increase in ethylene production is observed in transgenic plants that overexpress the ethylene biosynthesis gene encoding ACC oxidase (page 134 column 1 first paragraph). Hedden et al. also teach that homeostasis in hormone biosynthetic pathways and interactions between different classes of hormones present practical problems with respect to altering hormone levels and achieving desired effects through the genetic engineering of plants using plant hormone biosynthesis genes (page 135 column 1).

Given the functional diversity of plant hormone biosynthetic enzymes, both within the biosynthetic pathway of a particular plant hormone as well as between the biosynthetic pathways of different plant hormones, the manipulation of any hormone biosynthetic enzyme other than the cytokinin biosynthetic enzyme *ipt* in order to select transformed plant cells would be unpredictable. The specification provides no guidance

with respect to which plant hormone synthesis genes other than the cytokinin synthesis gene *ipt* to express in order to produce an effect that would be useful for the selection of transformed plant cells. The specification only provides guidance with respect to the expression of the *ipt* cytokinin synthesis gene as a selectable marker gene, with transformed plants being selected on the basis of bud differentiation from calli (a cytokinin effect) grown in cytokinin free media. Accordingly, it would require undue experimentation for one skilled in the art to determine which plant hormone synthesis genes other than the cytokinin synthesis gene *ipt* to express in order to select transformed plant cells.

Third, a variety of structurally and functionally distinct plant hormone signal transduction genes are known the art. For example, the *CKI1* cytokinin signal transduction gene and the *etr1* ethylene signal transduction gene encode proteins similar to histidine kinases, whereas the *ctr1* ethylene signal transduction gene encodes a protein similar to Raf protein kinases, the *ein3* ethylene signal transduction gene, the *abi3* abscisic acid signal transduction gene and the *gai1* and *rga1* gibberellin signal transduction genes encode proteins similar to transcription factors, the *abi1* and *abi2* abscisic acid signal transduction genes encode proteins similar to 2C phosphatases, and the *spy1* gibberellin signal transduction gene encodes a protein similar to Ser(Thr)-O-linked acetylglucosamine transferases (McCourt, Ann. Rev. Plant Physiol. Plant Mol. Biol. 1999, Vol. 50, pages 219-243). The ability of any of these particular proteins to have a detectable effect when overexpressed in a transgenic plant or plant cell would be dependent on variety of factors specific to each protein, such as the availability of its

specific hormone, its susceptibility to regulation by other molecules, or the availability of subsequent compounds required to effect the transduction of a specific hormone signal.

Given the functional diversity of the products of plant hormones signal transduction genes in general, the expression of any plant hormone signal transduction gene other than the cytokinin signal transduction gene CKI1 for the purpose of selecting transformed plant cells would be unpredictable. The specification provides no guidance with respect to which plant hormone signal transduction genes other than the cytokinin signal transduction gene CKI1 to express in order to produce an effect useful for the selection of transformed plant cells. The specification only provides guidance with respect to the expression of the CKI1 cytokinin signal transduction gene as a selectable marker gene, with transformed plants being selected on the basis of bud differentiation from calli (a cytokinin effect) grown in cytokinin free media. Accordingly, it would require undue experimentation for one skilled in the art to determine which plant hormone signal transduction genes other than the cytokinin signal transduction gene CKI1 to express in order to select transformed plant cells.

Applicant additionally argues that the Examiner is incorrect to assert that plant hormone signal transduction proteins would be detoxified, because the Examiner confuses degradation and detoxification, as degradation does not always involve detoxification, and detoxification does not always involve degradation. Applicant argues that one skilled in the art can easily understand that the protein is not subjected to detoxification in plant cells, and that proteins that function in signal transduction

pathways are indispensable for growth and differentiation and would naturally be destined to exist in various plant cells (brief pages 6-7).

The Examiner does not dispute that degradation does not always involve detoxification, and detoxification does not always involve degradation. However, the Examiner maintains that while plant cells in general would be expected to contain proteins that function in signal transduction pathways at some point in time or under certain circumstances, the presence of any specific signal transduction protein in any specific plant cell type at a specific time or under specific circumstances would depend on the cell's metabolism with respect to the specific signal transduction protein in question.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 8 and 13, and claims dependent thereon, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is indefinite in the recitation of "the CKI1 gene", because it is unclear what is designated by the acronym "CKI1".

Claim 8 is indefinite in the recitation of "the *ipt* (isopentenyl transferase) gene". because it is unclear what is designated by the acronym "*ipt*". The use of parentheses also makes it unclear whether "isopentenyl transferase" is intended to be a claim limitation.

Claim Rejections - 35 USC § 103

Claims 1-13 remain rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent No. 0 716 147 (12 June 1996, Applicant's IDS) in view of Kakimoto et al. (8 November 1996, Science, Vol. 274, pages 982-985, Applicant's IDS) and claims 1-13 remain also remain rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,965,791 (12 October 1999) in view of Kakimoto et al. (8 November 1996, Science, Vol. 274, pages 982-985, Applicant's IDS), for the reasons of record set forth in the office action mailed November 4, 2002.

Applicant's arguments filed January 31, 2003, have been fully considered but they are not persuasive. .

Applicant argues that the references fail to teach or suggest the vector of claim 1. With respect to the cited reference of Kakimoto et al., Applicant argues that one reading the reference would conclude that the purpose of the vector described therein was to express CKI1, and that therefore CKI1 was the desired gene. Applicant also argues that one reading the reference would conclude that the additional genes of the Ti plasmid were present to assist and direct the expression of CKI1, not that they were the desired genes to be expressed. Additionally, Applicant points out that Kakimoto et al. used an antibiotic resistance gene as a selectable marker gene. Applicant argues that since Kakimoto et al. fail to disclose a desired gene which is not a plant hormone signal transduction gene, since Kakimoto et al. used an antibiotic resistance gene as a selectable marker gene, and since CKI1 is not used as a selectable marker gene by Kakimoto et al., Kakimoto et al. fail to disclose a plant hormone signal transduction gene as a selectable marker gene (brief pages 8-9).

With respect to "desired gene", the Examiner maintains that the claims do not specify what a desired gene is, but only what a desired gene is not, namely a desired gene is not a selectable marker gene. The broadest reasonable interpretation of "desired gene" would be any gene whose presence or expression would be desirable. Accordingly, any of the additional genes of the Ti plasmid into which the plant hormone signal transduction gene was cloned would constitute a "desired gene". With respect to "plant hormone signal transduction gene as a selectable marker gene", the Examiner maintains that it is not necessary that Kakimoto et al. teach that CKI1 is a selectable marker gene, or use CKI1 as a selectable marker gene, as the ability of CKI1 to function as a selectable marker gene is an inherent feature of the CKI1 gene.

Applicant further argues that the experimental data set forth in the specification is striking evidence of nonobviousness as evidenced by the unexpected effect that selection efficiency can be improved by using a plant hormone signal transduction gene as a selectable marker gene (brief pages 9-10).

U.S. Patent No. 5,965,791 was cited with respect to the use of a removable DNA element in a plant transformation vector to enable the removal of a selectable marker gene from transgenic plants. The Examiner maintains that because US 791 does not employ a plant hormone signal transduction gene, and because all of the vectors of the claimed invention do employ a plant hormone signal transduction gene, the relevant comparison for selection efficiency would be between the vectors of the instant invention and the vector of Kakimoto et al., which does employ a plant hormone signal transduction gene.

Applicant additionally argues that the references fail to teach or suggest the vectors of claims 2-13 (brief page 10-15).

With respect to claim 2 Applicant argues that the references fail to teach or suggest a vector which additionally contains a removable DNA element where the selectable marker gene is positioned such that it behaves integrally with the removable DNA element and where the desired gene does not behave integrally with the DNA element (brief pages 10-11).

The Examiner maintains that because European Patent No. 0 716 147 and U.S. Patent No. 5,965,791 teach a vector comprising a desired gene that does not behave integrally with the DNA element and a selectable marker gene that is the plant hormone synthesis gene *ipt* located within a removable DNA element that is derived from the yeast site-specific recombination system pSR1, it would have been obvious for one skilled in the art to substitute the CKI1 cytokinin signal transduction gene taught by Kakimoto et al. for the plant hormone synthesis gene *ipt* taught by European Patent No. 0 716 147 and U.S. Patent No. 5,965,791, without any surprising or unexpected results.

With respect to claim 3 Applicant argues that the references fail to teach or suggest that the selectable marker gene is present within the removable DNA element (brief page 11).

The Examiner maintains that because European Patent No. 0 716 147 and U.S. Patent No. 5,965,791 teach a selectable marker gene that is the plant hormone synthesis gene *ipt* located within a removable DNA element , it would have been obvious for one skilled in the art to substitute the CKI1 cytokinin signal transduction gene taught by

Kakimoto et al. for the plant hormone synthesis gene *ipt* taught by European Patent No. 0 716 147 and U.S. Patent No. 5,965,791, without any surprising or unexpected results.

With respect to claim 4 Applicant argues that the references fail to teach or suggest the combination of a plant hormone synthesis gene in combination with a plant hormone signal transduction gene as selectable marker genes (brief page 11).

The Examiner maintains that because European Patent No. 0 716 147 and U.S. Patent No. 5,965,791 teach a selectable marker gene that is the plant hormone synthesis gene *ipt* and because Kakimoto et al. teach a CKI1 plant hormone signal transduction gene as a selectable marker gene, it would have been obvious for one skilled in the art to combine the CKI1 cytokinin signal transduction gene taught by Kakimoto et al. and the plant hormone synthesis gene *ipt* taught by European Patent No. 0 716 147 and U.S. Patent No. 5,965,791, without any surprising or unexpected results, as the *ipt* gene encodes a cytokinin biosynthesis enzyme.

With respect to claim 5 Applicant argues that the references fail to teach or suggest that the plant hormone signal transduction gene is a cytokinin signal transduction gene (brief page 12).

The Examiner maintains that because Kakimoto et al. teach a CKI1 plant hormone signal transduction gene as a selectable marker gene, the claimed invention is obvious, and in fact would be anticipated, but for the limitation that the desired gene is not a selectable marker gene.

With respect to claim 6 Applicant argues that the references fail to teach or suggest that the cytokinin signal transduction gene is the CKI1 gene derived from *Arabidopsis thaliana* (brief page 12).

The Examiner maintains that because Kakimoto et al. teach a CKI1 plant hormone signal transduction gene derived from *Arabidopsis thaliana*, the claimed invention is obvious, and in fact would be anticipated, but for the limitation that the desired gene is not a selectable marker gene.

With respect to claim 7 Applicant argues that the references fail to teach or suggest the plant hormone synthesis gene is a cytokinin synthesis gene (brief pages 12-13).

The Examiner maintains that the claimed invention is obvious because European Patent No. 0 716 147 and U.S. Patent No. 5,965,791 teach a selectable marker gene that is the cytokinin synthesis gene *ipt* .

With respect to claim 8 Applicant argues that the references fail to teach or suggest that the cytokinin synthesis gene is the *ipt* gene which is present on the T-DNA of *Agrobacterium tumefaciens* (brief page 13).

The Examiner maintains that the claimed invention is obvious because European Patent No. 0 716 147 and U.S. Patent No. 5,965,791 teach a selectable marker gene that is the cytokinin synthesis gene *ipt* which is present on the T-DNA of *Agrobacterium tumefaciens*.

With respect to claim 9 Applicant argues that the references fail to teach or suggest that the removable DNA element is derived from a site-specific recombination system (brief page 13).

The Examiner maintains that the claimed invention is obvious because European Patent No. 0 716 147 and U.S. Patent No. 5,965,791 teach a vector comprising a removable DNA element that is derived from the yeast site-specific recombination system pSR1.

With respect to claim 10 Applicant argues that the references fail to teach or suggest that the desired gene encodes an enzyme (brief page 14).

The Examiner maintains that the claimed invention is obvious because Kakimoto et al. teach as desired genes any of the additional genes of the Ti plasmid into which the plant hormone signal transduction gene was cloned. Since these additional genes include selectable marker genes such as *Amp* and *Htp*, Kakimoto et al. teach desired genes that encode enzymes.

With respect to claim 11 Applicant argues that since the references fail to teach or suggest the vector of claim 1, they also fail to teach or suggest introducing the vector of claim 1 into a plant (brief page 14).

The Examiner maintains that the references teach or suggest the vector of claim 1, as discussed *supra*, and thus they also teach or suggest introducing the vector of claim 1 into a plant.

With respect to claim 12 Applicant argues that since the references fail to teach or suggest the vector of claim 1, they also fail to teach or suggest expressing a gene in plants using the vector of claim 1 (brief pages 14-15).

The Examiner maintains that the references teach or suggest the vector of claim 1, as discussed *supra*, and thus they also teach or suggest expressing a gene in plants using the vector of claim 1.

With respect to claim 13 Applicant argues that since the references fail to teach or suggest the vector of claim 1, they also fail to teach or suggest the identification of plants which express a gene in a plant using the vector of claim 1 (brief page 15).

The Examiner maintains that the references teach or suggest the vector of claim 1, as discussed *supra*, and thus they also teach or suggest the identification of plants which express a gene in a plant using the vector of claim 1.

Double Patenting

Claims 1-9 remain rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4, 5, 6, and 7 of U.S. Patent No. 5,965,791 in view of Kakimoto et al. (8 November 1996, Science, Vol. 274, pages 982-985, Applicant's IDS), for the reasons of record set forth in the office action mailed November 4, 2002.

Applicant's arguments filed January 31, 2003, have been fully considered but they are not persuasive.

Applicant traverses the double patenting rejection on the grounds stated previously under 35 USC 103 with respect to the Kakimoto et al. reference (brief page 15).

The Examiner maintains that Applicant's arguments are not persuasive for the reasons set forth above in response to the traversal of the rejection made under 35 USC 103.

Remarks

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (703) 605-1210. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

CC
May 1, 2003

ELIZABETH F. McELWAIN
PRIMARY EXAMINER
GROUP 1800